

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A scanning optical system for exposing a predetermined imaging area on a surface to be scanned to a plurality of laser beams, comprising:

a plurality of light sources that emit a plurality of laser beams having different wavelengths, respectively;

a single deflector which deflects the plurality of laser beams simultaneously;

an imaging optical system that converges the plurality of laser beams deflected by said single deflector on the surface to be scanned; and

a beam detector that receives the plurality of laser beams directed to outside of the predetermined imaging area via at least one lens element included in said imaging optical system, a synchronizing signal being generated upon detection of each of the plurality of light beams by said beam detector,

an optical characteristic of said imaging optical system being configured such that the laser beams ~~directed to~~ incident on said predetermined imaging area

are aligned in a scanning direction with respect to one another, while the laser beams ~~directed to~~ incident on said beam detector are shifted in the scanning direction with respect to one another.

2. (Previously Presented) The scanning optical system according to claim 1, wherein said single deflector comprises a polygonal mirror having a plurality of reflecting surfaces, one of said plurality of reflecting surfaces reflecting the plurality of laser beams during each scan, said polygonal mirror being rotated so that the laser beams reflected by said reflecting surface scan.

3. (Original) The scanning optical system according to claim 1, wherein said beam detector comprises a single light receiving element, each of the plurality of laser beams being incident on said single light receiving element.

4. (Original) The scanning optical system according to claim 1, wherein said imaging optical system includes at least one refractive lens element, and a diffractive lens structure is formed onto said refractive lens element so that said imaging optical system exhibits said optical characteristic.

5. (Previously Presented) The scanning optical system according to claim 4, wherein said diffractive lens structure is formed in an predetermined area on a

surface of said refractive lens element, the laser beams directed to said imaging area passing through said predetermined area, the laser beams directed to said beam detector passing through an area outside of said predetermined area.

6. (Previously Presented) The scanning optical system according to claim 5, wherein said diffractive lens structure compensates for a lateral chromatic aberration of said at least one refractive lens element.

7. (Currently Amended) A scanning optical system for exposing a predetermined imaging area on a surface to be scanned, comprising:

a plurality of light sources that emit a plurality of laser beams having different wavelengths, respectively;

a single deflector which deflects the plurality of laser beams simultaneously;

an imaging optical system that converges the plurality of laser beams deflected by said single deflector on the surface to be scanned; and

a beam detector that receives the plurality of laser beams directed to outside of the predetermined imaging area via at least one optical element included in said imaging optical system,

said imaging optical system having ~~a first range and a second range along a scanning direction~~ a first area and a second area on an incident surface of the

imaging optical system, the laser beams directed to said imaging area passing through said first ~~range~~ area, the laser beams directed to said beam detector passing through said second ~~range~~ area, said imaging optical system being configured such that, within said first ~~range~~ area, a lateral chromatic aberration of said imaging optical system is compensated for, and such that within said second ~~range~~ area, a lateral chromatic aberration remains so that the plurality of laser beams are separated from each other in the scanning direction.

8. (Currently Amended) The scanning optical system according to claim 7, wherein an optical characteristic of said imaging optical system, within said first ~~range~~ area, is configured such that a plurality of beam spots respectively formed by the plurality of laser beams within said imaging area are aligned in the scanning direction, while the plurality of laser beams passing through said second ~~range~~ area are incident on said beam detector at different timings.

9. (Currently Amended) A scanning optical system for exposing a predetermined imaging area on a surface to be scanned to a plurality of laser beams, comprising:

a plurality of light sources that emit a plurality of laser beams having different wavelengths, respectively, during a scanning operation;

a single deflector which deflects the plurality of laser beams during the scanning operation;

an imaging optical system that converges the plurality of laser beams deflected by said single deflector on the surface to be scanned; and

a beam detector that receives the plurality of laser beams directed to outside of the predetermined imaging area via at least one lens element included in said imaging optical system, a synchronizing signal being generated upon detection of each of the plurality of light beams by said beam detector,

an optical characteristic of said imaging optical system being configured such that the laser beams ~~directed to~~ incident on said predetermined imaging area are aligned with respect to one another in a scanning direction, while the laser beams ~~directed to~~ incident on said beam detector are shifted with respect to one another in the scanning direction.

10. (New) A scanning optical system, comprising:

at least two laser beams having different wavelengths;

a deflector which deflects the laser beams during a scanning operation;

a synchronizing signal beam detector that detects the laser beams,

an imaging lens element that converges the laser beams deflected by the deflector, the imaging lens element including a first area that increases separation

of the laser beams in the scanning direction in order to improve separate detection of each laser beam by the synchronizing signal beam detector, and a second area that does not increase separation of the laser beams in the scanning direction in order to maintain aligned imaging during exposure of an imaging area of a surface to be scanned.